

Green meat works: AJ Bush & Sons

SUSTAINING A GREEN BUSINESS

WHAT COULD A MEAT RENDERING PLANT, AN INNER-CITY DESIGN AGENCY AND A PUBLISHING HOUSE POSSIBLY HAVE IN COMMON? THE ANSWER IS AN ENTHUSIASM FOR SUSTAINABILITY, AND THE WILL TO TACKLE THE CHALLENGES THAT ARISE ON THE PATH TOWARD RUNNING GREENER BUSINESSES.

AJ Bush & Sons is a meat rendering plant in Riverstone, NSW, with 75 staff. The company started life as a meat retailer, Bush's Meats, nearly 100 years ago. Following its switch from coal-fired boilers to natural gas in 1999, the NSW plant has saved 9000 tonnes of carbon dioxide per year from entering the atmosphere. NSW general manager Cam Wilkinson says, "We knew it was the right thing to do".

Meat rendering is the recycling of meat by-products to produce protein meal and tallow for use in pet food, stock and aqua feed, soap and bio-diesel fuel. Heat is essential in the rendering process, through the use of powerful 6 and 10 Mega-watt boilers.

Why address environmental impact now?

"Burning coal and waste oil isn't the right thing to do in the Sydney basin with its growing population. But we knew that any measures we took needed to make good business sense. We saw the shortfalls of our coal-fired burners with regard to the environment, process control, public health and staff wellbeing. We suspected that ultimately these issues would need to be considered and we were right."

What did AJ Bush & Sons do?

- Changed boilers from coal to natural gas as part of a BP-supported fuel-switching project
 - Improved internal energy efficiency by maintaining a power factor correction system (en.wikipedia.org/wiki/Power_factor_correction)
 - Installed high-efficiency Toshiba electric motors
 - Improved odour control by modifying a boiler to re-use 'process air' (the non-condensable air stream produced in the heating process) as its primary combustion air
 - Implemented water and electricity savings measures around the plant and communicated these to staff
- AJ Bush & Sons became an Australian Greenhouse Friendly-certified project in 2000, which means people can buy our carbon savings as carbon offsets.

Biggest challenge?

Natural gas is more efficient but costly. Convincing the board a large financial outlay plus increased operating costs actually made business sense was tough, understandably! Achieving the short-term savings hoped for after the switch also presented a challenge, for example, the company expected a higher price for carbon credits.

Benefits of a sustainability strategy?

In simple dollar terms the company pays more to generate steam using gas than with coal. The benefits of the switch are numerous, though difficult to quantify in dollar terms:

- Process control and reliability improvements (coal-fired boilers are less reliable and slower to modulate)
- Maintenance cost reductions due to more efficient gas-fired boilers
- Reduced electricity consumption due to electric motors and power factor correction system
- Improved staff morale and health benefits from eliminating coal and waste oil
- Cancellation of daily delivery trucks carrying coal and waste oil to the site.

The local Environmental Protection Agency (EPA) also surprised by estimating the fuel switch saved \$2.3 million per year from public health costs in the region – not a negligible sum!

Future sustainability plans?

The Queensland plant is capturing methane biogas from an onsite anaerobic pond and will use this gas to either fire up a boiler or generate electricity to return to the grid. The company plans to do the same at our NSW plant to reduce our natural gas consumption."



Key advice:

Don't look backwards – look to the future. That way, you'll see the opportunities.

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